SUBSTITUTE SPECIFICATION

TITLE OF THE INVENTION

MECHANICAL LINK BETWEEN SIDE WALLS AND THE REAR WALL OF A SHEET CASING

CROSS REFERENCE TO RELATED APPLICATIONS

[001] This application is based on and hereby claims priority to PCT Application No. PCT/DE00/00955 filed on March 29, 2000 and German Application No. DE 299 05 811.5 filed on March 30, 1999 in Germany, the contents of which are hereby incorporated by reference.

BACKGROUND OF THE INVENTION

[002] The present invention relates to a mechanical connection between the side walls and the rear wall of a sheet-metal casing.

[003] The mechanical connection between the side walls of a sheet-metal casing and the rear wall usually takes place by additional measures, e.g. welding, riveting, screwing, adhesive bonding, etc. and/or by additional manipulating operations, such as, for example, bending lugs, etc.

SUMMARY OF THE INVENTION

[004] The object of the present invention is to specify a mechanical connection of the type mentioned in the introduction which can be produced without additional measures being required.

[005] One possible way to achieve the object is with a mechanical connection of the type mentioned above in that the base part, side walls and rear wall of the sheet-metal casing comprise a single sheet-metal part, in that the side walls have a cutout in the region of the top rear corner, and in that the rear wall has an angled section which, on its sides, has hook-like extensions which snap into the cutouts of the side walls when the actual rear wall is swung into position.

[006] In the case of the mechanical connection according to the invention, the blank of the sheet-metal part, which forms, inter alia, the side walls and the rear wall, is configured such that, during the bending operation immediately after the rear wall has been swung into position, the rear wall is forced to snap into the side walls, and mechanical connection between the side walls and the rear wall is thus produced. The additional measures mentioned above may be dispensed with.

BRIEF DESCRIPTION OF THE DRAWINGS

[007] These and other objects and advantages of the present invention will become more apparent and more readily appreciated from the following description of the preferred embodiments, taken in conjunction with the accompanying drawings of which:

Fig. 1 shows the completed mechanical connection,

Fig. 2 shows a view of part of a side wall and of the rear wall just before the rear wall snaps into the side walls, and

Figs. 3 to 5 show different states during the operation of the rear wall snapping into the side walls.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[008] Reference will now be made in detail to the preferred embodiments of the present invention, examples of which are illustrated in the accompanying drawings, wherein like reference numerals refer to like elements throughout.

[009] Fig. 1 shows a casing part with a mechanical connection according to the present invention, the casing part comprising the base part 1, the side walls 2 and the rear wall 3.

[0010] Fig. 2 shows the specifics of the details. The side walls 2 have a cutout 4 in the top rear corner. The actual rear wall 3 has an angled section 5, which is produced before the rear wall 3 is actually swung into position. It is conceivable here for it to be possible for the angled section 5 to be produced at the same time as the side walls 2 are swung into position.

[0011] The angled sections 5 of the rear wall 3 have hook-like extensions 6 on each of their sides. These hook-like extensions 6 are preferably likewise parts of the single sheet-metal part and each have an outwardly running slope 7 in their front region. When the rear wall 3 is swung into position, the slope slides against the side walls 2, which have already been swung into position, and pushes them apart from one another until the hook-like extensions 6 can pass into the cutouts 4.

[0012] This operation is illustrated in Figs. 3 to 5. Once the hook-like extensions 6 have passed into the cutouts 4, the rear wall springs back, with the result that the side walls 2 and the rear wall 3 are hooked together. Fig. 3 shows the relative positions of the rear wall 3 and the side wall 2 before engagement. Fig. 4 shows the relative positions of the rear wall 3 and the side wall 2 after the rear wall 3 is moved between the side walls 2. Fig. 5 shows the relative

positions of the rear wall 3 and the side wall 2 after the rear wall 3 springs back to hook the rear wall 3 to the side wall 2.

[0013] The invention has been described in detail with particular reference to preferred embodiments thereof and examples, but it will be understood that variations and modifications can be effected within the spirit and scope of the invention.